

AMENDMENTS TO THE CLAIMS

1. (Withdrawn) An array substrate for a liquid crystal display device, comprising:

a substrate;

a thin film transistor having a signal line of dual layered structure of a copper compound and copper, and

a pixel electrode connected to the thin film transistor.
2. (Withdrawn) The array substrate according to claim 1, wherein the copper compound includes nitrogen.
3. (Withdrawn) The array substrate according to claim 1, wherein the copper compound is formed by a reaction between a reactive gas and copper.
4. (Withdrawn) The array substrate according to claim 3, wherein the reactive gas is one of NH_3 and N_2 .
5. (Withdrawn) The array substrate according to claim 1, wherein the signal line is one of a gate line and a data line.
6. (Withdrawn) The array substrate according to claim 1, wherein the thin film transistor further comprises a gate electrode with a dual layer structure of a copper compound and copper.

7. (Withdrawn) The array substrate of claim 1, wherein the thin film transistor further comprises a drain electrode with a dual layer structure of a copper compound and copper.

8. (Withdrawn) The array substrate of claim 1, wherein the thin film transistor further comprises a source electrode with a dual layer structure of a copper compound and copper.

9. (Currently Amended) A manufacturing method of an array substrate for a liquid crystal display device, comprising:

forming a first copper compound layer directly on a substrate;

forming a first copper layer directly on the first copper compound layer;

forming a signal-gate line and a gate electrode by etching the first copper compound layer and the first copper layer, wherein a top surface of the first copper layer has a narrower width than a top surface of the first copper compound layer and the first copper layer is thicker than the first copper compound layer;

forming a gate insulating layer on the gate line and the gate electrode;

forming an active layer on the gate insulating layer over the gate electrode;

forming an ohmic contact layer the active layer;

forming a second copper compound layer on the ohmic contact layer;

forming a second copper layer on the second copper compound layer on the ohmic contact layer;

forming a data line, a source electrode, a drain electrode and an island-shaped metal layer by etching the second copper compound layer and the second copper layer on the ohmic contact

layer, wherein the data line crosses the gate line, the source and drain electrodes over the gate electrode, and the island-shaped metal layer is disposed over the gate line;

forming a passivation layer on the data line, the source electrode, the drain electrode and the island-shaped metal layer, the passivation layer having a first contact hole exposing the drain electrode and a second contact hole exposing the island-shaped metal layer; forming a thin film transistor having the signal line; and

forming a pixel electrode on the passivation layer, the pixel electrode connected to the drain electrode through the first contact hole and connected to the island-shaped metal layer through the second contact hole, thin film transistor

wherein the first copper compound layer helps to increase adhesion between the first copper layer and the substrate, and the second copper compound layer helps to prevent a chemical reaction between the second copper layer and the silicon component of the ohmic contact layer.

10. (Currently Amended) The method according to claim 9, wherein the first and second copper compound layer is layers are formed in a processing chamber where a gas flows that chemically combines with the copper.

11. (Original) The method according to claim 10, wherein the gas is one of NH₃ and N₂.

12. (Cancelled)

13. (Currently Amended) The method according to claim 9, wherein the first and second copper layer is layers are formed in a processing chamber where a gas flows that does not chemically combine with the copper.

14. (Original) The method according to claim 13, wherein the gas is Ar.

15. (Cancelled)

16. (Cancelled)

17. (Withdrawn) An array substrate for a liquid crystal display device, comprising:
a substrate;
a gate line having a dual layered structure of a copper compound and copper;
a source line having a dual layered structure of a copper compound and copper;
a thin film transistor further comprising:
an active layer;
an ohmic contact layer;
a gate electrode having a dual layered structure of a copper compound and copper;
a source electrode having a dual layered structure of a copper compound and copper; and
a drain electrode having a dual layered structure of a copper compound and copper;

a passivation layer; and

a pixel electrode connected to the drain electrode.

18. (Withdrawn) The array substrate according to claim 17, further comprising an electrode having a dual layered structure of a copper compound and copper formed over the gate line connected to the pixel electrode.

19. (Withdrawn) The array substrate according to claim 17, wherein the copper compound includes nitrogen.

20. (Withdrawn) The array substrate according to claim 19, wherein the copper compound is formed by a reaction between a reactive gas and copper.

21. (Withdrawn) The array substrate according to claim 20, wherein the reactive gas is one of NH_3 and N_2 .